

Newton's First Law of Motion Lab

Name _____ Date _____

Chair Role _____ Section _____

Part One: Tower of Washers

Materials

- 8 washers

Procedure

1. To prepare for this experiment, stack 4 washers one on top of the other so that you form a tower of washers.
2. Aim one washer at the bottom of the stack of four washers and give it a good hard flick with your finger or hand.
3. Flick a stack of two washers into a stack of four washers.
4. Flick a stack of four washers into a stack of four washers.

Data

Explain your observations in terms of Newton's 1st Law.

Part Two: Hole in One

Materials

- Plastic cup
- Index card 3"x 3"
- Pennies

Procedure

1. Place the index card flat on top of the cup.
2. Place one penny on top of the card so it is in the center.
3. Carefully flick the card straight and hard. If done properly, the card will move, but the objects will fall into the beaker.
4. See how many pennies you can place on the card and still have them fall into the cup.

Data

Give a detailed description of what you did and observed in this section of the lab?

Explain in terms of Newton's First Law of Motion why the penny fell into the cup when the card was flicked.

Part Three: Straw Battle

Materials

- Drinking straws
- Marble
- Notebooks

Procedure

1. Set up the notebooks on the width of the table so that there is a aisle about thirty centimeters wide.
2. Place a large piece of white paper in the center of the aisle.
3. Have two people sit on one side of the table while the other two sit on the other side facing the first two people.
4. Place the marble so that it is at the center of the white piece of paper.
5. On the count of three, each student tries to blow air through the straw in order to move the marble. The objective is to move the marble all the way across the table to your opponent's side. You can only use air to move and stop the marble. Keep track of your score.

Data

Explain in terms of Newton's First Law of Motion why it was hard to get the ball rolling using only air and the straw.

Explain in terms of Newton's First Law of Motion why the ball was hard to stop once it got rolling using only air and the straw.

Analyze & Conclude

1. What is Newton's First Law of Motion?

2. Explain why inertia is related to Newton's First Law of Motion.

3. List five examples you see every day that demonstrates Newton's First Law of Motion.
